2006-08 ENGINE

Intake Manifold and Exhaust System - Civic (Except Hybrid)

INTAKE MANIFOLD AND EXHAUST SYSTEM (R18A1)

NOTE: Refer to the INTAKE MANIFOLD AND EXHAUST SYSTEM (GX) (SUPPLEMENT) article for additional information for the GX model.

INTAKE MANIFOLD REMOVAL AND INSTALLATION

Exploded View

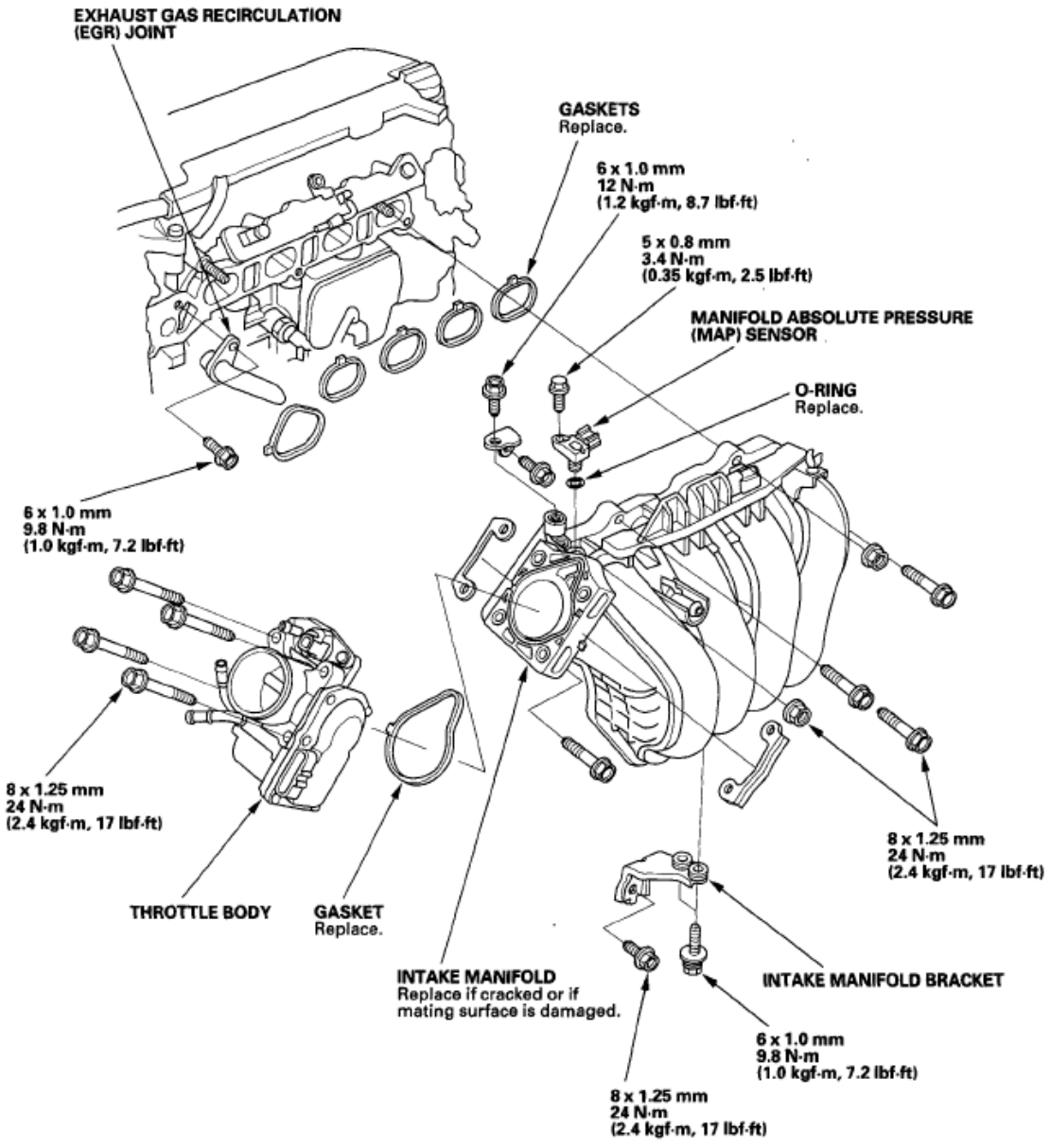

Fig. 1: Exploded View Of Intake Manifold (With Torque Specifications)

Removal

1. Remove the cowl cover and under-cowl panel (see **FRONT GRILLE COVER REPLACEMENT**).
2. Remove the air cleaner assembly (see **AIR CLEANER ELEMENT INSPECTION/REPLACEMENT**).
3. Remove the air intake duct.

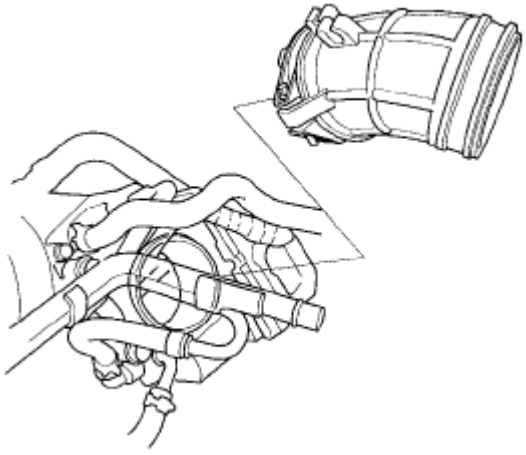

Fig. 2: Identifying Air Intake Duct

4. Remove the injector cover.

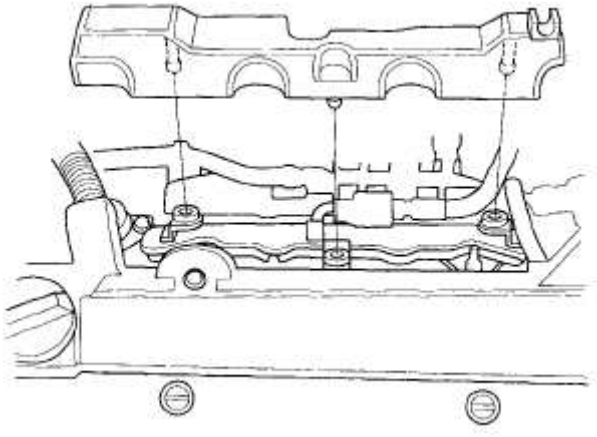

Fig. 3: Identifying Injector Cover

5. Remove the evaporative emission (EVAP) canister hose (A), brake booster vacuum hose (B), positive crankcase ventilation (PCV) hose (C), and power steering (P/S) hose clamp (D).

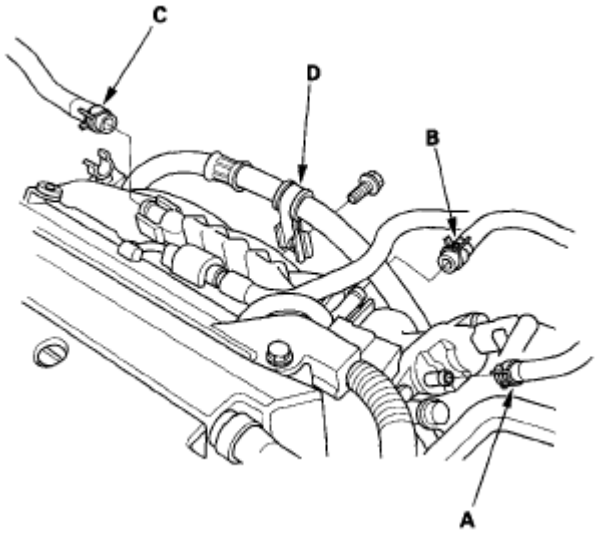

Fig. 4: Identifying Evaporative Emission Canister Hose And Brake Booster Vacuum Hose

6. Remove the quick-connect fitting cover (A), then disconnect the fuel feed hose (see **FUEL LINE/QUICK-CONNECT FITTING REMOVAL**).

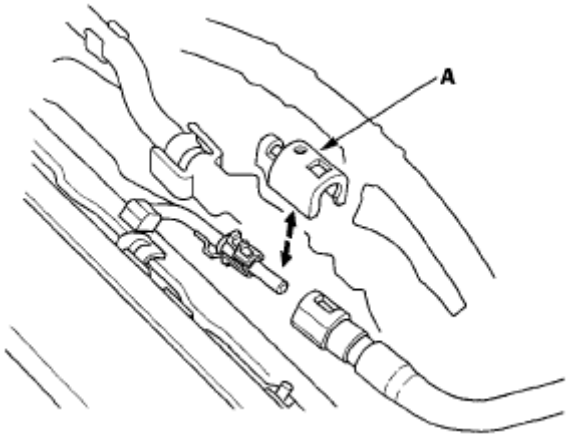

Fig. 5: Identifying Quick-Connect Fitting Cover

7. Remove the engine wire harness connectors and wire harness clamps from the intake manifold.
   - Throttle actuator connector
   - Manifold absolute pressure (MAP) sensor connector
   - Evaporative emission (EVAP) canister purge valve connector

- Intake manifold tuning (IMT) valve actuator connector

8. Remove the water bypass hoses, then plug the water bypass hoses.

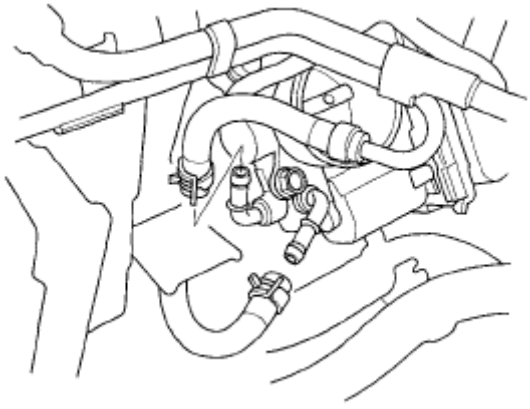

Fig. 6: Identifying Water Bypass Hoses

9. Remove the throttle body.

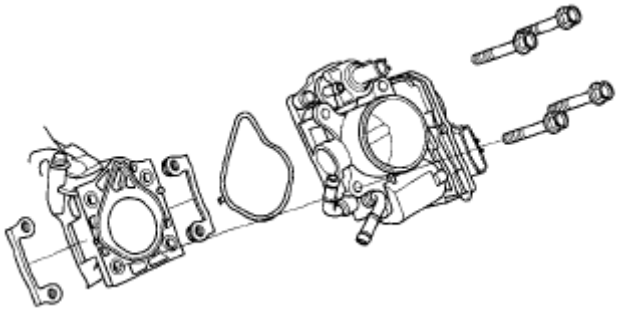

Fig. 7: Identifying Throttle Body

10. Remove the heater hose clamp bracket.

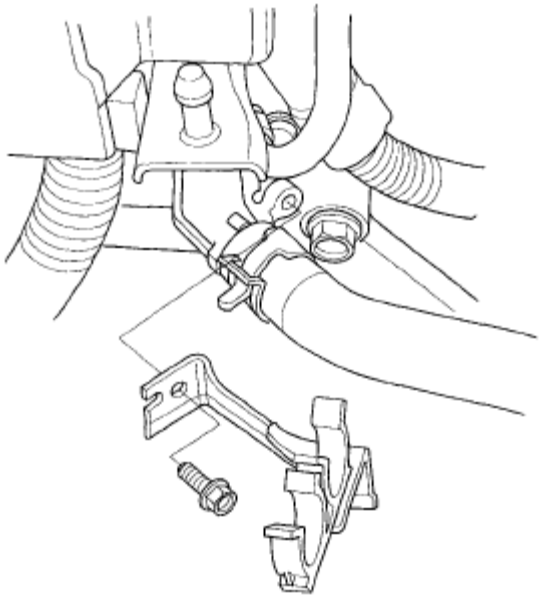

Fig. 8: Identifying Heater Hose Clamp Bracket

11. Raise the vehicle on the lift to full height.
12. Remove the intake manifold bracket.

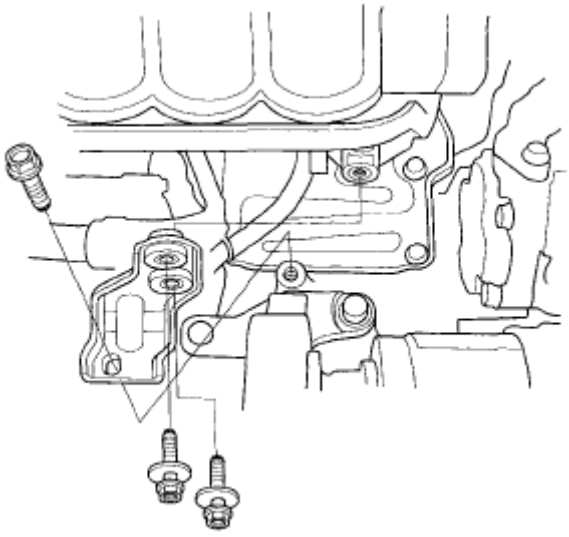

Fig. 9: Identifying Intake Manifold Bracket

13. Lower the vehicle on the lift.
14. Remove the all intake manifold mounting bolts and nuts, then remove the intake manifold from the cylinder head.

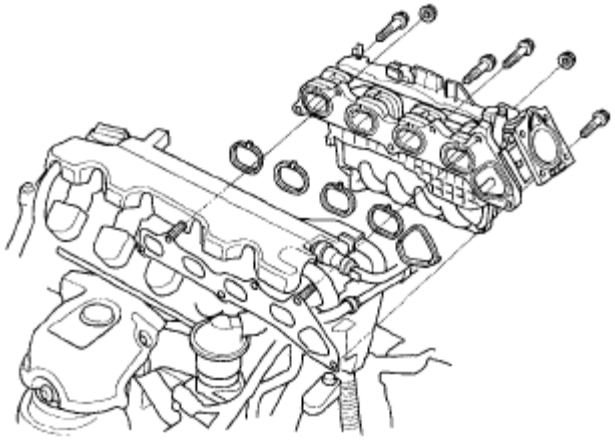

Fig. 10: Identifying Intake Manifold Mounting Bolts And Nuts

15. Remove the harness clamps, then remove the intake manifold from the vehicle.

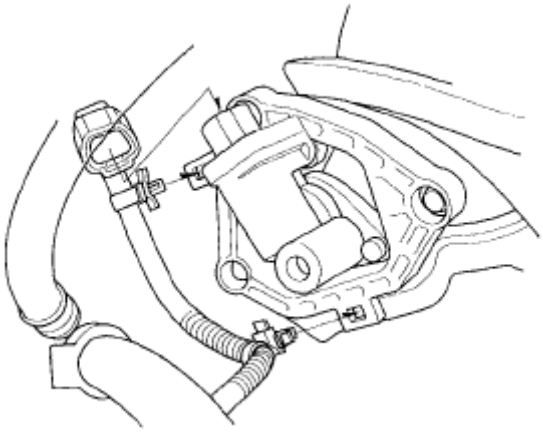

Fig. 11: Identifying Harness Clamps

Installation

1. Install the harness clamps to the intake manifold.

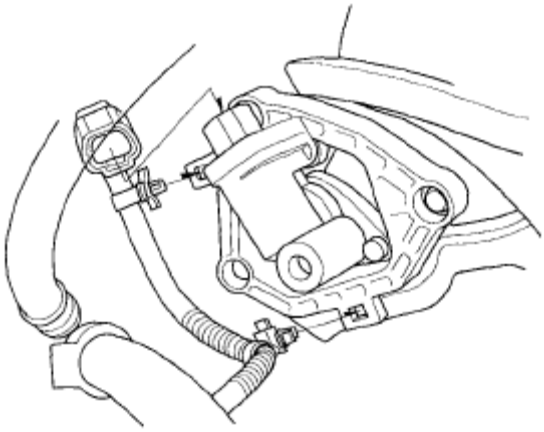

Fig. 12: Identifying Harness Clamps

2. Install the intake manifold (A) with new gaskets (B), and tighten the bolts and nuts in a crisscross pattern in two or three steps, beginning with the inner bolt.

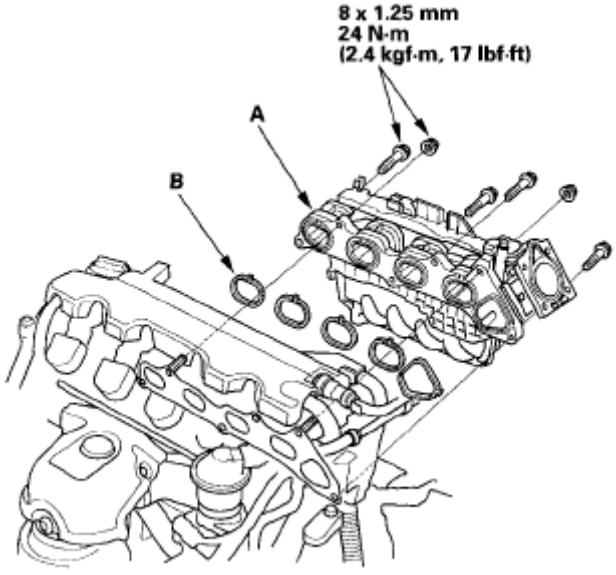

Fig. 13: Identifying Intake Manifold And Gaskets (With Torque Specifications)

3. Raise the vehicle on the lift to full height.
4. Install the intake manifold bracket (A).

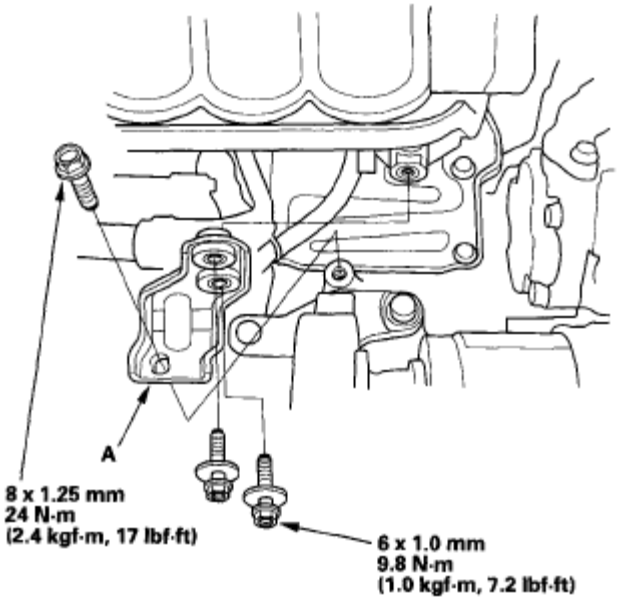

Fig. 14: Identifying Intake Manifold Bracket (With Torque Specifications)

5. Lower the vehicle on the lift.
6. Install the heater hose clamp bracket.

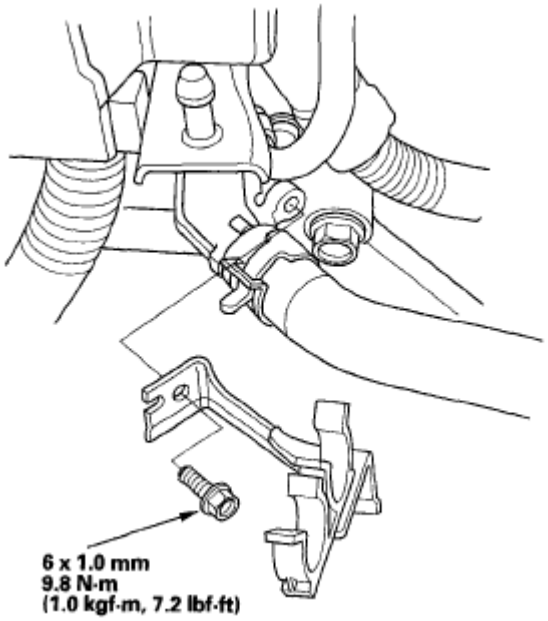

Fig. 15: Identifying Heater Hose Clamp Bracket (With Torque Specifications)

7. Install the throttle body (A) with a new gasket (B).

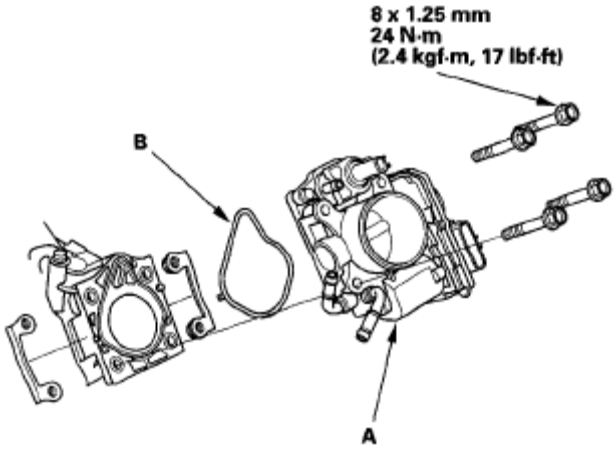

Fig. 16: Identifying Throttle Body And Gasket (With Torque Specifications)

8. Install the water bypass hoses.

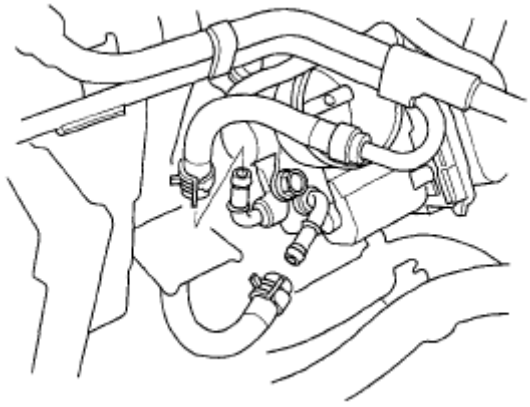

Fig. 17: Identifying Water Bypass Hoses

9. Connect the engine wire harness connectors, and install the wire harness clamps to the intake manifold.
   - Throttle actuator connector
   - Manifold absolute pressure (MAP) sensor connector
   - Evaporative emission (EVAP) canister purge valve connector
   - Intake manifold tuning (IMT) valve actuator connector
10. Connect the fuel feed hose (see **FUEL LINE/QUICK-CONNECT FITTING REMOVAL**), then install the quick-connect fitting cover (A).

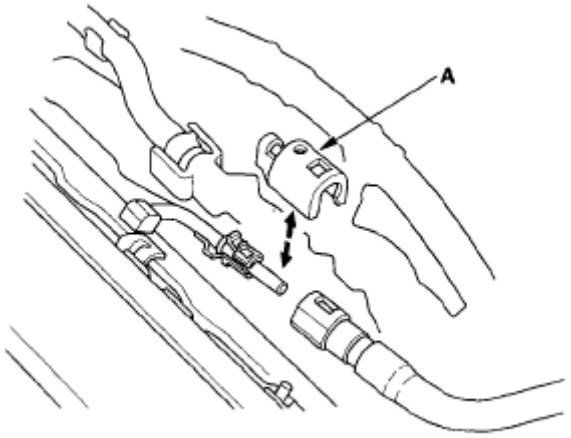

Fig. 18: Identifying Quick-Connect Fitting Cover

11. Install the evaporative emission (EVAP) canister hose (A), brake booster vacuum hose (B), positive crankcase ventilation (PCV) hose (C), and power steering (P/S) hose clamp (D).

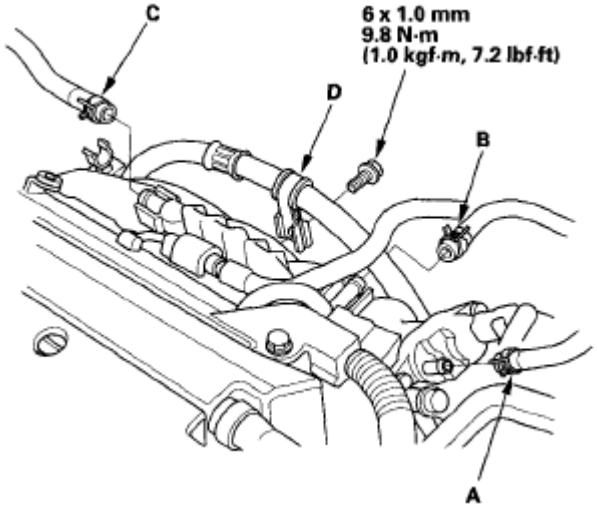

Fig. 19: Identifying Evaporative Emission Canister Hose And Brake Booster Vacuum Hose (With Torque Specifications)

12. Install the injector cover.

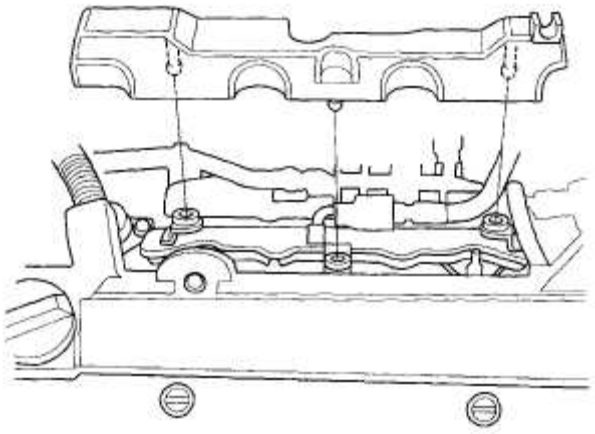

Fig. 20: Identifying Injector Cover

13. Install the air intake duct.

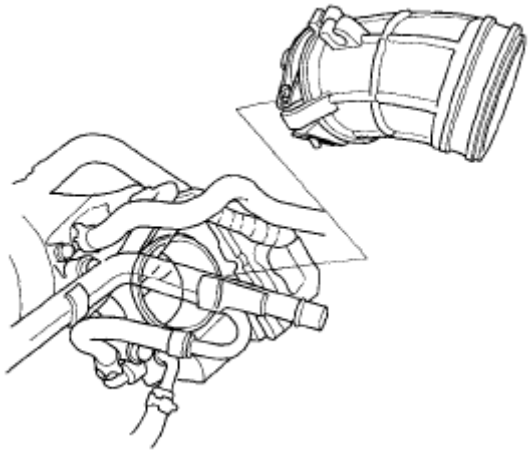

Fig. 21: Identifying Air Intake Duct

14. Install the air cleaner assembly (see **AIR CLEANER ELEMENT INSPECTION/REPLACEMENT**).
15. Install the cowl cover and under-cowl panel (see **FRONT GRILLE COVER REPLACEMENT**).
16. Clean up any spilled engine coolant.
17. After installation, check that all tubes, hoses, and connectors are installed correctly.
18. Refill the radiator with engine coolant, and bleed the air from the cooling system with the heater valve open (see step 8 on **COOLANT**

REPLACEMENT).

EXHAUST PIPE AND MUFFLER REPLACEMENT

NOTE: Use new gaskets and self-locking nuts when reassembling.

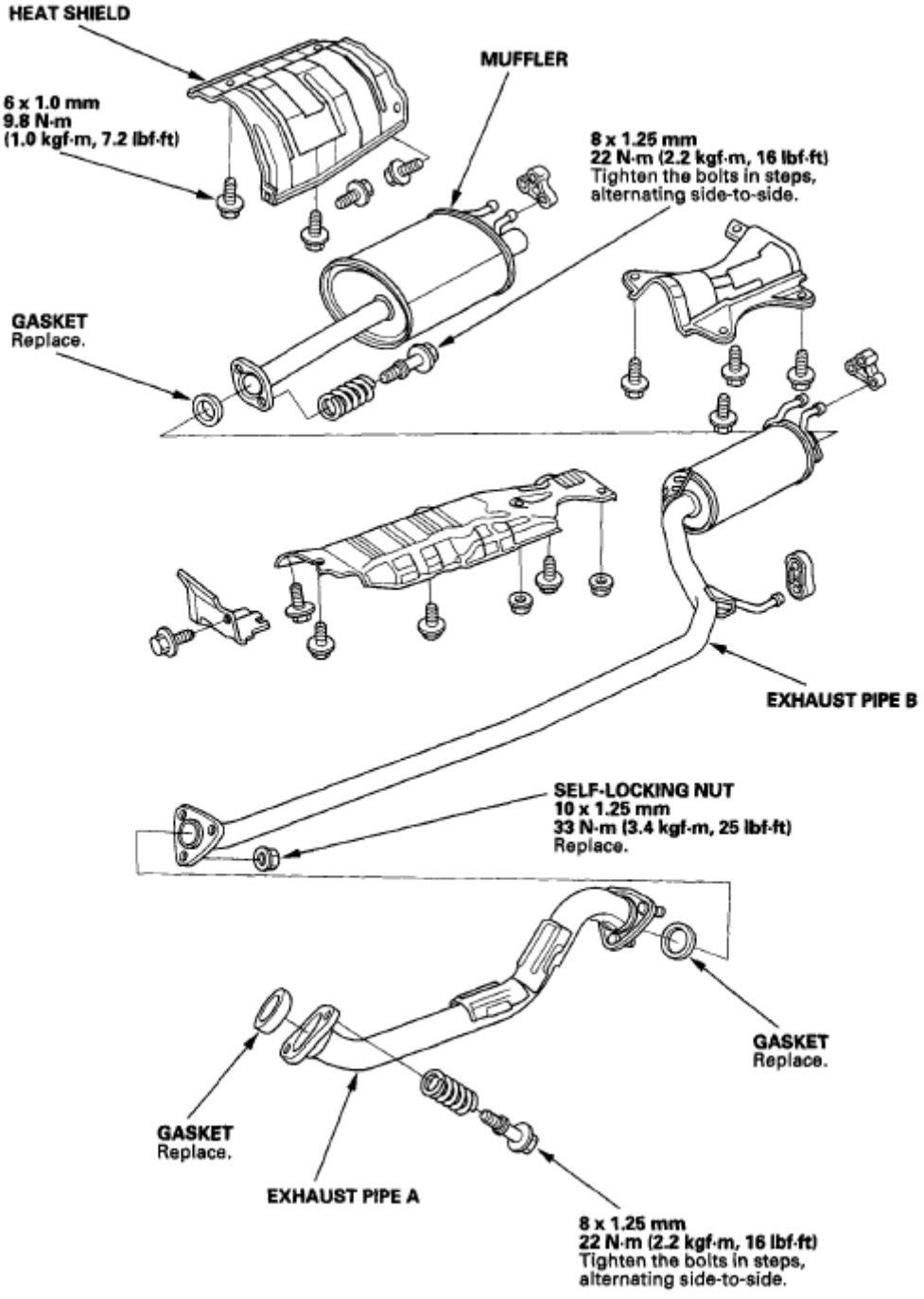

Fig. 22: Identifying Exhaust Pipe And Muffler Components (With Torque

Specifications)

INTAKE MANIFOLD AND EXHAUST SYSTEM (K20Z3)

INTAKE MANIFOLD REMOVAL AND INSTALLATION

Exploded View

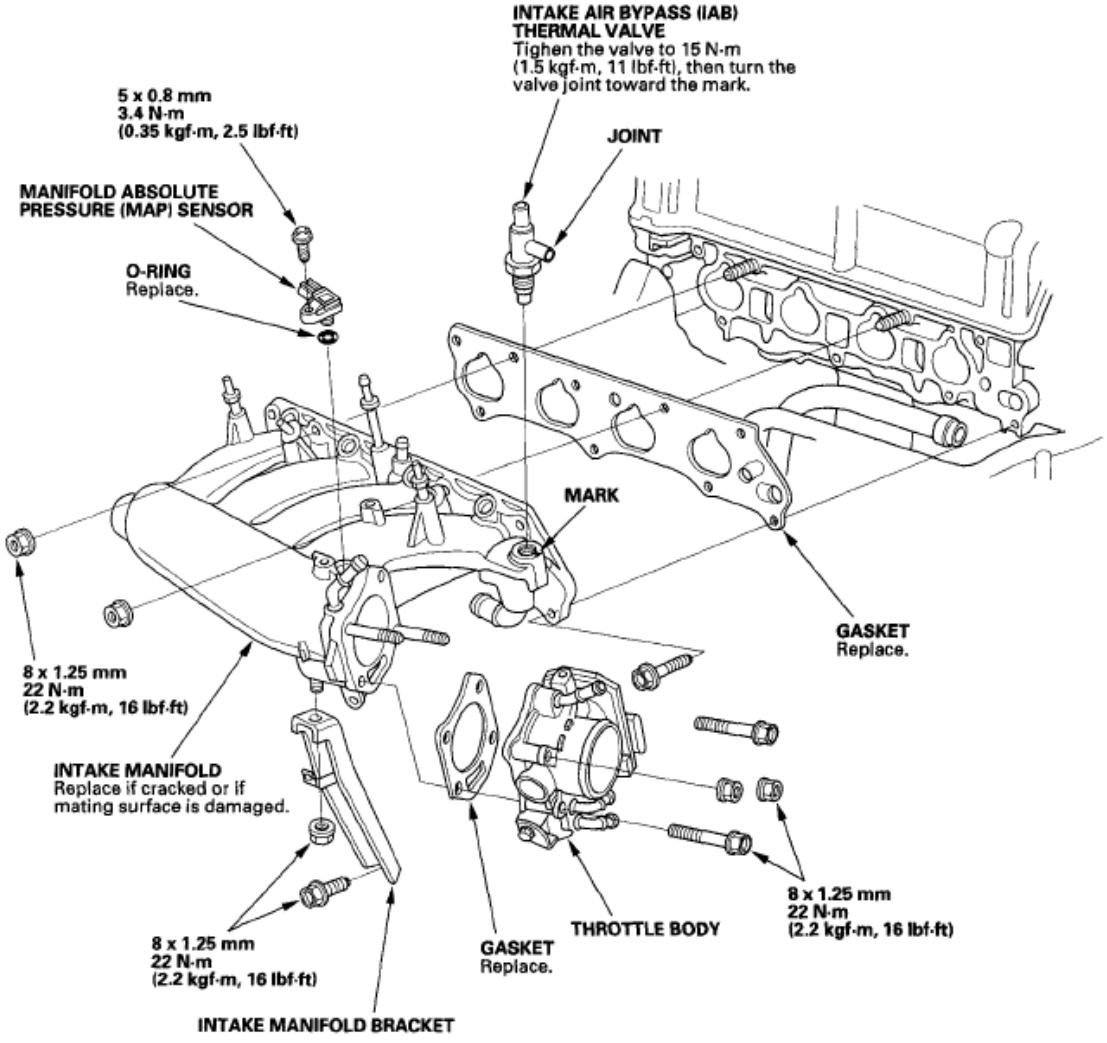

Fig. 23: Exploded View Of Intake Manifold (With Torque Specifications)

Removal

1. Drain the engine coolant (see **COOLANT CHECK**).
2. Remove the engine cover.

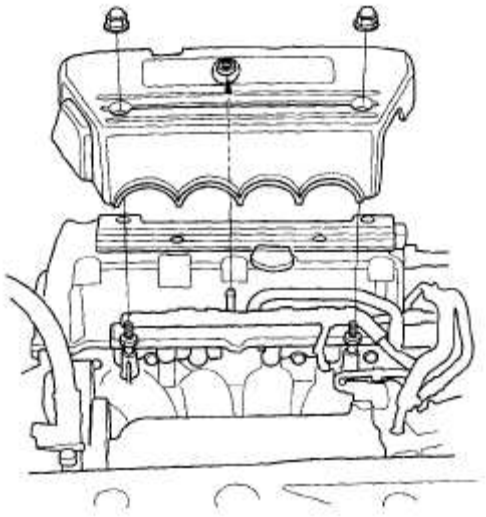

Fig. 24: Identifying Engine Cover

3. Remove the vacuum hose (A) and breather pipe (B), then remove the air intake duct (C).

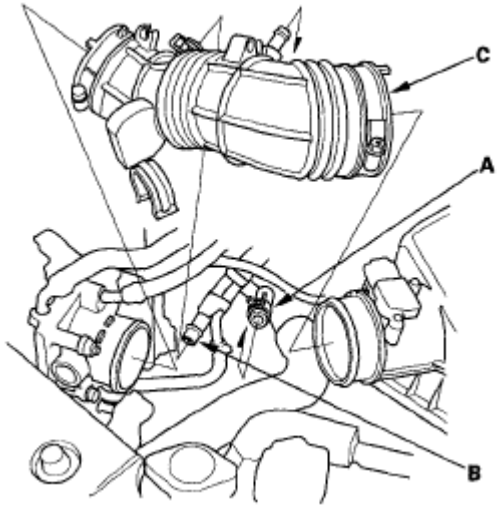

Fig. 25: Identifying Air Intake Duct

4. Remove the engine wire harness connectors and wire harness clamps from the intake manifold.
   - Four fuel injector connectors
   - Manifold absolute pressure (MAP) sensor connector
   - Throttle actuator connector

5. Remove the ground cable (A) and harness clamp bracket (B), then remove the harness holder (C) from the stay.

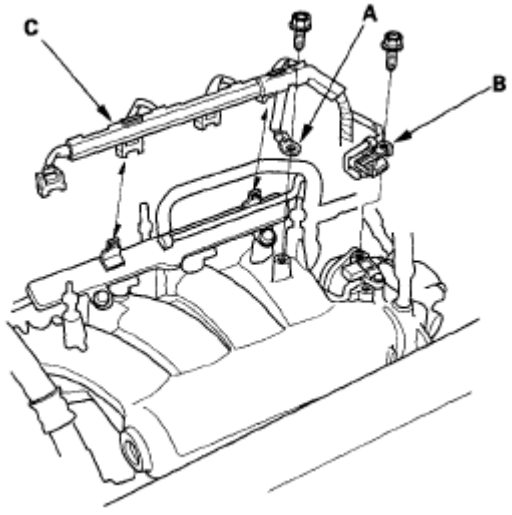

Fig. 26: Identifying Ground Cable, Harness Clamp Bracket And Harness Holder

6. Remove the positive crankcase ventilation (PCV) hose (A), evaporative emission (EVAP) canister hose (B) and brake booster vacuum hose (C).

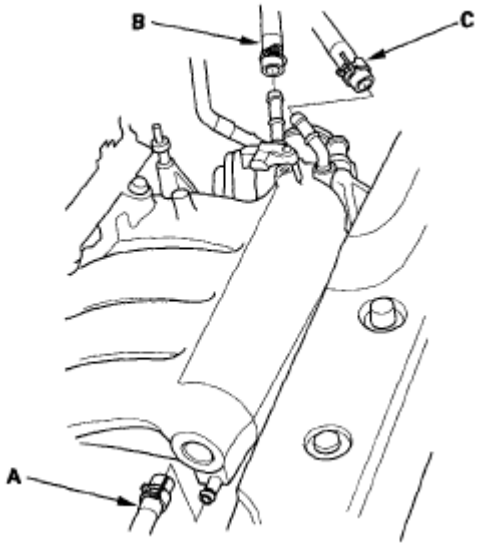

Fig. 27: Identifying Positive Crankcase Ventilation Hose

7. Remove the water bypass hoses, then plug the water bypass hoses.

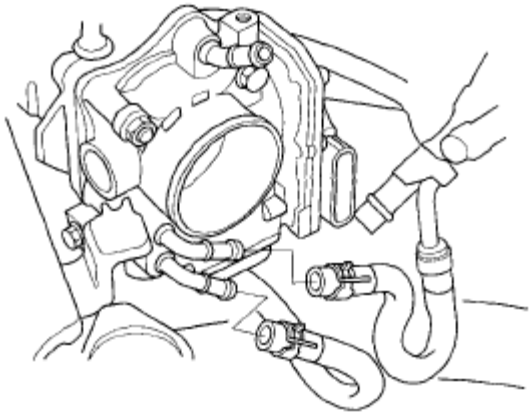

Fig. 28: Identifying Water Bypass Hoses

8. Remove the quick-connect fitting cover (A), then disconnect the fuel feed hose (see **FUEL LINE/QUICK-CONNECT FITTING REMOVAL**).

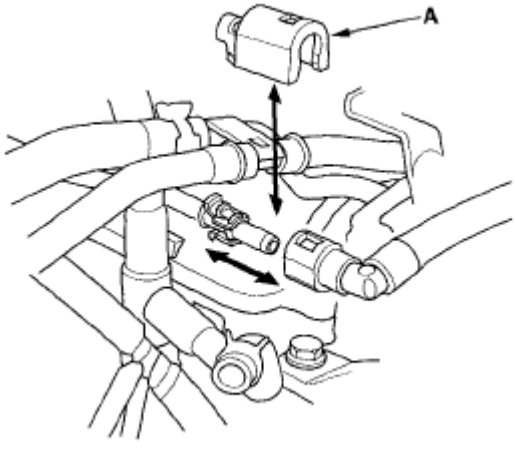

Fig. 29: Identifying Quick-Connect Fitting Cover

9. Raise the vehicle on the lift to full height.
10. Remove the connector (A), then remove the intake manifold bracket (B).

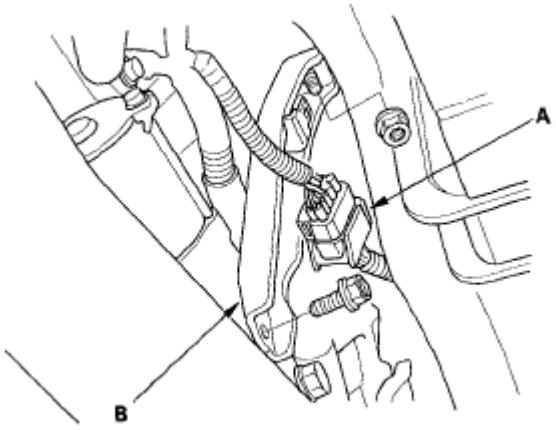

Fig. 30: Identifying Intake Manifold Bracket

11. Lower the vehicle on the lift.
12. Remove the intake manifold (A) from the cylinder head, then remove the water bypass hose (B).

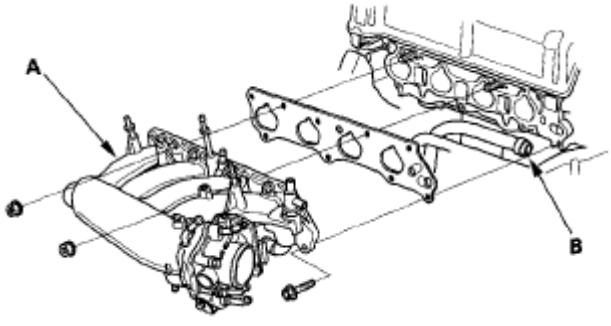

Fig. 31: Identifying Intake Manifold

Installation

1. Install the water bypass hose (A) to the intake manifold (B), then install the intake manifold with a new gasket (C), and tighten the bolts and nuts in a crisscross pattern in two or three steps, beginning with the inner bolt.

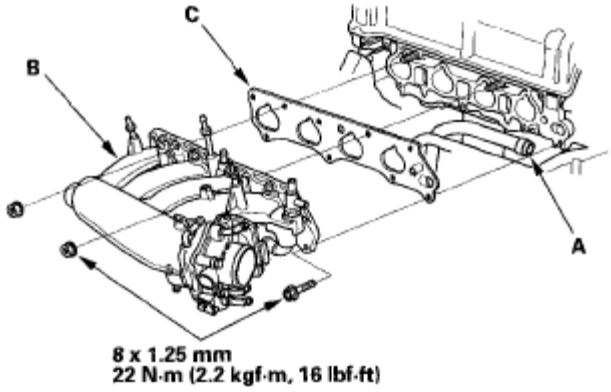

Fig. 32: Identifying Intake Manifold (With Torque Specifications)

2. Raise the vehicle on the lift to full height.
3. Install the intake manifold bracket (A), then install the connector (B).

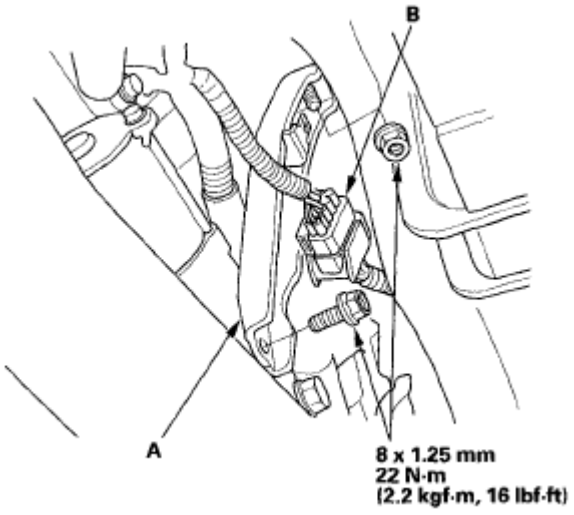

Fig. 33: Identifying Intake Manifold Bracket (With Torque Specifications)

4. Lower the vehicle on the lift.
5. Connect the fuel feed hose (see **FUEL LINE/QUICK-CONNECT FITTING INSTALLATION**), then install the quick-connect fitting cover (A).

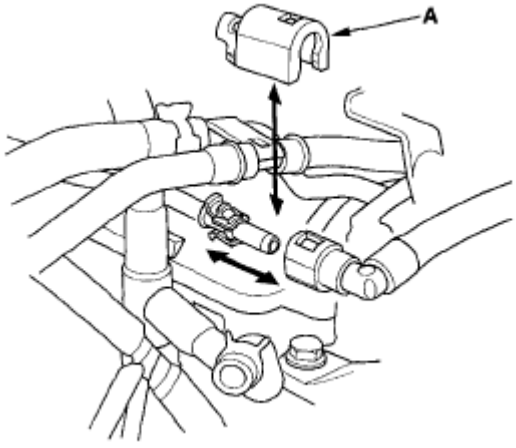

Fig. 34: Identifying Quick-Connect Fitting Cover

6. Install the water bypass hoses.

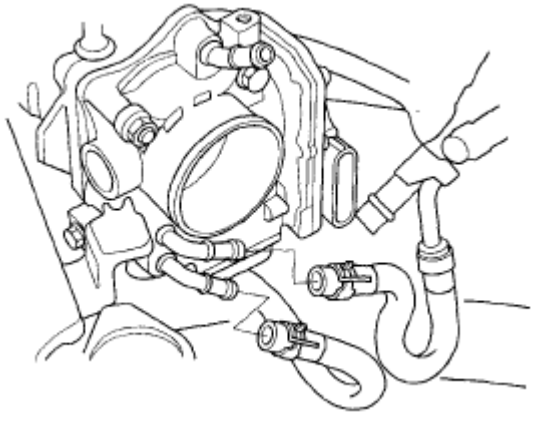

Fig. 35: Identifying Water Bypass Hoses

7. Install the positive crankcase ventilation (PCV) hose (A), evaporative emission (EVAP) canister hose (B) and brake booster vacuum hose (C).

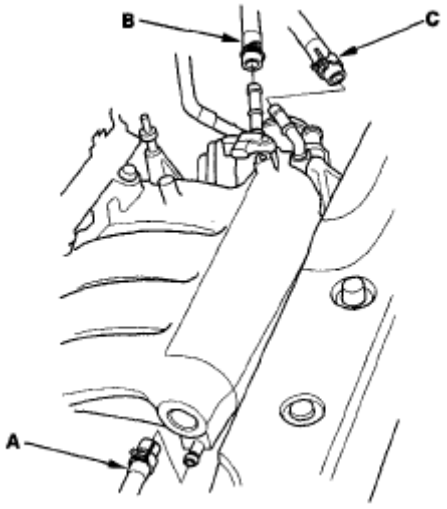

Fig. 36: Identifying Positive Crankcase Ventilation Hose

8. Install the harness holder (A) to the stay, then install the ground cable (B) and harness clamp bracket (C).

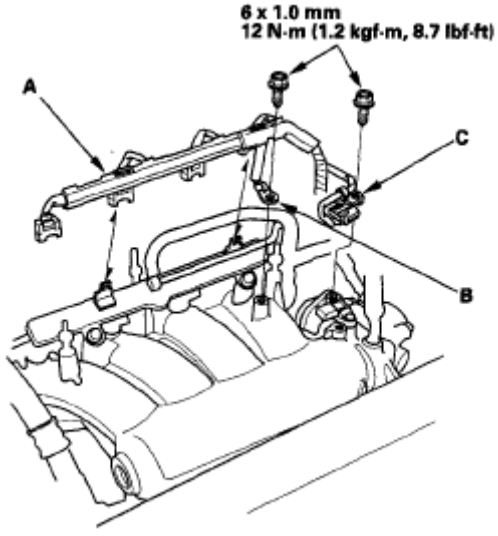

Fig. 37: Identifying Harness Holder (With Torque Specifications)

9. Connect the engine wire harness connectors, and install the wire harness clamps to the intake manifold.
   - Four fuel injector connectors
   - Manifold absolute pressure (MAP) sensor connector
   - Throttle actuator connector

10. Install the air intake duct (A), then install the vacuum hose (B) and breather pipe (C).

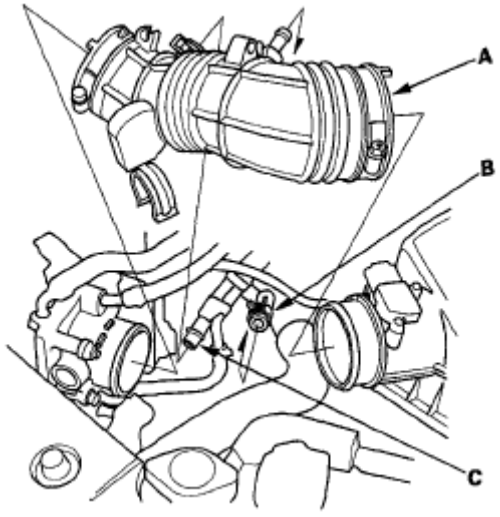

Fig. 38: Identifying Air Intake Duct

11. Install the engine cover.

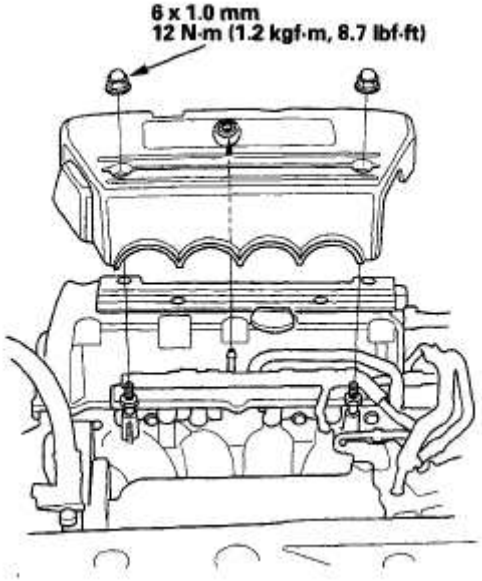

Fig. 39: Identifying Engine Cover (With Torque Specifications)

12. Clean up any spilled engine coolant.
13. After installation, check that all tubes, hoses and connectors are installed

correctly.

14. Refill the radiator with engine coolant, and bleed the air from the cooling system with the heater valve open (see step 6 on **COOLANT REPLACEMENT**).

EXHAUST MANIFOLD REMOVAL AND INSTALLATION

1. Relieve the fuel pressure (see **FUEL PRESSURE RELIEVING**).
2. Loosen the drain plug in the radiator, and drain the engine coolant (see **COOLANT CHECK**).
3. Remove the under-cowl panel (see **FRONT GRILLE COVER REPLACEMENT**).
4. Remove the evaporative emission (EVAP) canister hose (A) and brake booster vacuum hose (B).

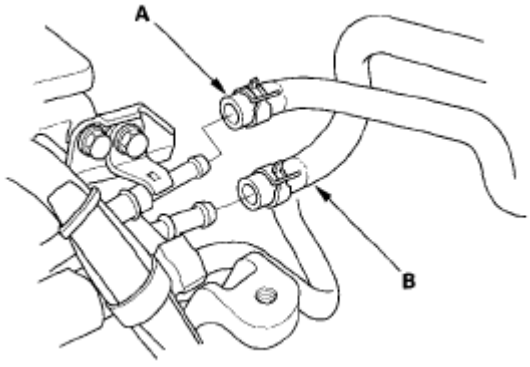

Fig. 40: Identifying Evaporative Emission Canister Hose And Brake Booster Vacuum Hose

5. Remove the quick-connect fitting cover (A), then disconnect the fuel feed hose (see **FUEL LINE/QUICK-CONNECT FITTING REMOVAL**).

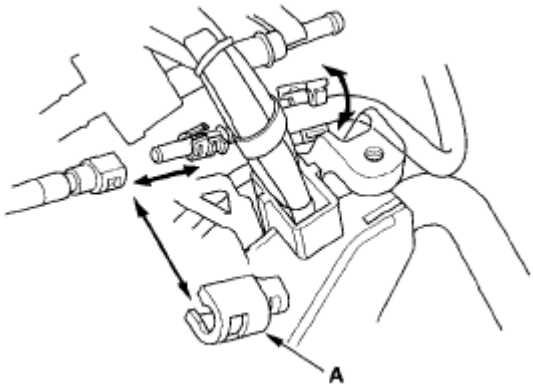

Fig. 41: Identifying Quick-Connect Fitting Cover

6. Remove the heater hoses.

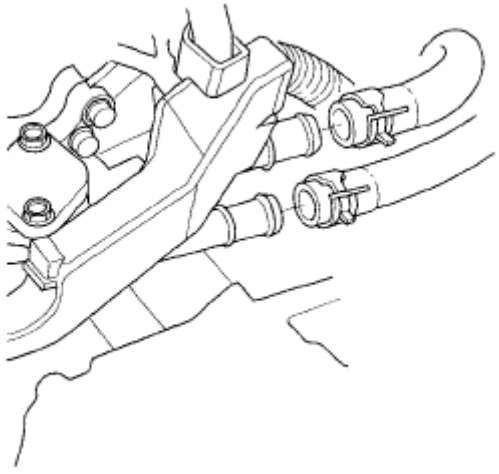

Fig. 42: Identifying Heater Hoses

7. Remove the rocker arm oil control solenoid (see **ROCKER ARM OIL CONTROL VALVE REMOVAL/INSTALLATION**).
8. Remove the intermediate shaft heat shield .
9. Remove the cover and exhaust manifold bracket, then remove the exhaust manifold.

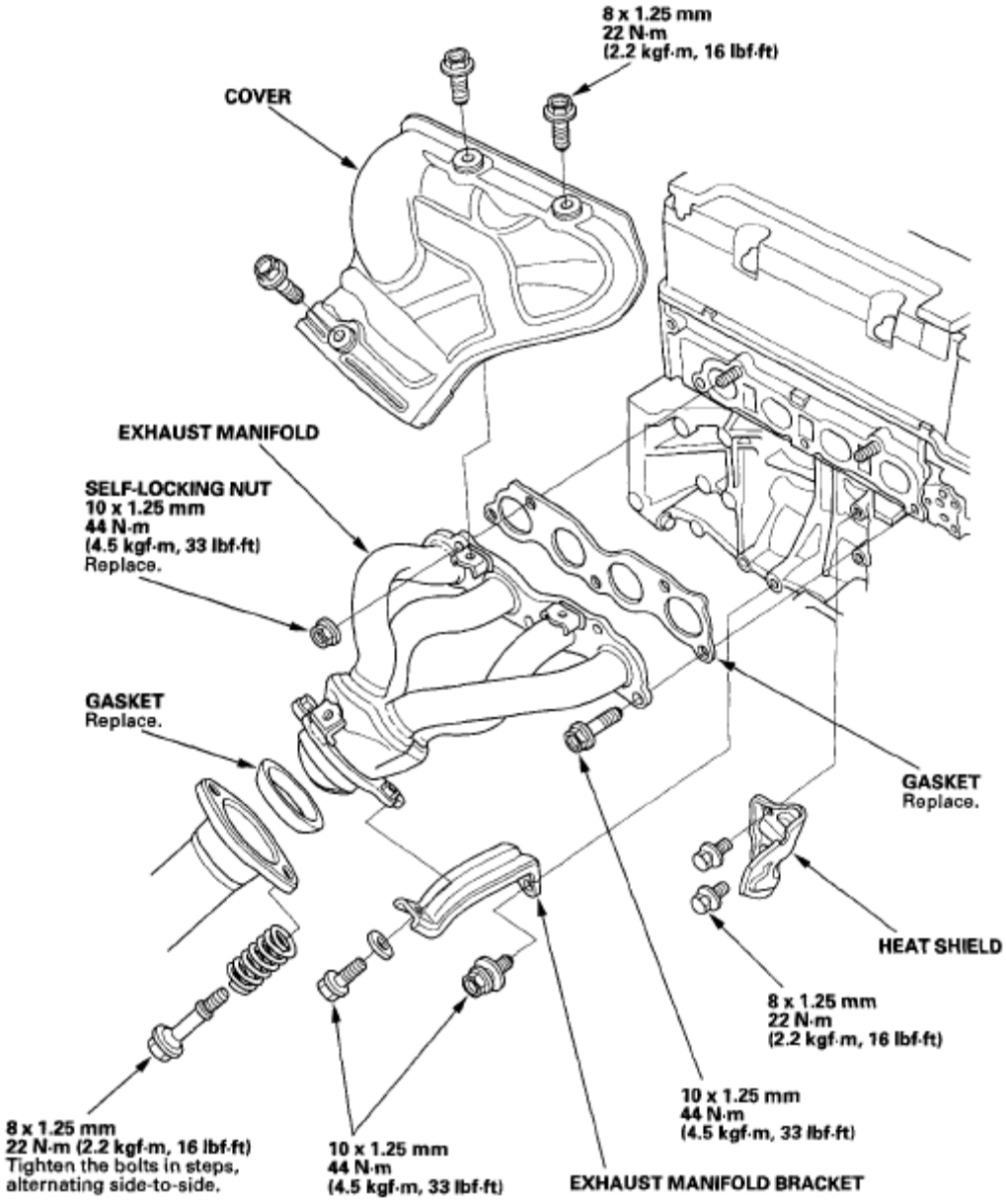

Fig. 43: Exploded View Of Exhaust Manifold (With Torque Specifications)

10. Install the exhaust manifold and tighten the bolts and nuts in a crisscross pattern in two or three steps, beginning with the inner bolt.
11. Install the other parts in the reverse order of removal.
12. Inspect for leaks: Turn the ignition switch ON (II) (do not operate the starter) so the fuel pump runs for about 2 seconds and pressurizes the fuel line. Repeat this operation two or three times, then check for fuel leakage at any point in the

fuel line.

13. Refill the radiator with engine coolant, and bleed air from the cooling system with the heater valve open (see step 6 on **COOLANT REPLACEMENT**).

EXHAUST PIPE AND MUFFLER REPLACEMENT

NOTE: Use new gaskets and self-locking nuts when reassembling.

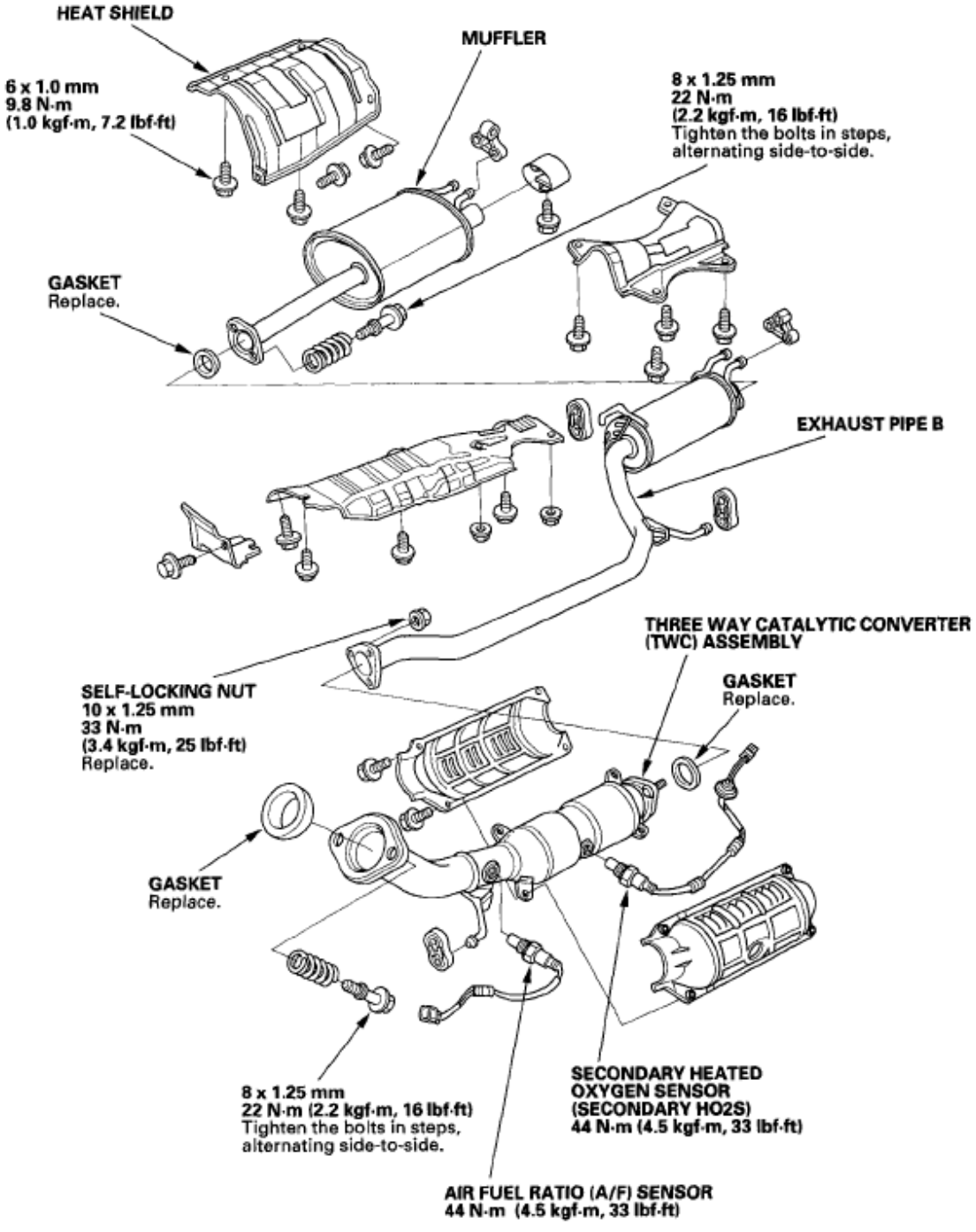

Fig. 44: Exploded View Of Exhaust Pipe And Muffler (With Torque Specifications)